

METHOD OF CONTROLLING THRESHOLD VOLTAGE OF NROM CELL

ABSTRACT OF THE DISCLOSURE

A method of two-sided asymmetric programming with a one-sided read for a
5 Nitride Read Only Memory (NROM) cell with different quantity of stored charges uses
the different interaction of the two bits to control the operation window of the
threshold voltage. Due to the increase of the threshold voltage operation window of a
NROM cell, four, eight, and sixteen memory states of a NROM cell can be achieved
through the combination of the left bit, the right bit, the quantity of charge, and the
10 charge position of its two bits.